ABSTRACT

The present invention is intended to increase the load
capacity of a tapered roller bearing and to decrease the
maximum face pressure on the raceway surfaces without
lowering the rigidity of the cage. The tapered roller
bearing comprises an inner ring, an outer ring, multiple
tapered rollers rollably disposed between the inner ring 2
and the outer ring 3, and a cage for holding the tapered
rollers at predetermined circumferential intervals, wherein
the roller coefficient γ thereof is larger than 0.94.
Herein, γ = (the number of the rollers × the average
diameter of the rollers)/(π × PCD).

FIG. 4

Bearing   Roller coefficient   Lifetime   Remarks

Comparative example 1

(Conventional bearing with cage made of steel plate)

16.4 hours

Flaking was observed on the inner ring.

Embodiment 1

(Bearing with cage made of steel plate)

40.2 hours

Stoppage occurred due to increased torque caused by abrasion

at the cage.

Embodiment 2

200 hours or more

No abnormality was observed, and the test was terminated.